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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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RONALD M. ANDERSON MICROSOFT CORPORATION 600 108TH AVENUE N.E., SUITE 507 BELLEVUE, WA 98004			CHOI, PETER H	
			ART UNIT	PAPER NUMBER
			3623	

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/997,616

Applicant(s)

PARDO ET AL.

Examiner

Peter Choi

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a **FINAL** office action upon examination of application number 09/997,616. Applicant elected claims 1-13 with traverse. Claims 14-47 have been withdrawn as directed towards non-elected claims. Claims 1-13 are pending in the application and have been examined on the merits discussed below.

Response to Amendment

2. Claims 1, 6, 9, and 11 have been amended by Applicant's amendment filed September 11, 2006. The Office Action has been updated to address the claims, as amended, and to provide further clarification on the previous grounds of rejection.

3. In view of claim amendments, the previous rejection of claim 6 under 35 U.S.C 101 is withdrawn.

Response to Arguments

4. Applicant's arguments filed September 11, 2006, with respect to the 35 U.S.C. 112, first paragraph rejection of claims 1-13 have been fully considered and are persuasive. The 35 U.S.C. 112, first paragraph rejection of claims 1-13 has been withdrawn.

5. Applicant's arguments filed September 11, 2006 have been fully considered but they are not persuasive.

Regarding the 35 U.S.C. 112, second paragraph rejection of claims 1-13, Applicant argues that the term "substantially" is not indefinite and has cited a plurality of Federal Circuit cases (Verve LLC v. Crane Cams Inc., and Liquid Dynamics Corp. v. Vaughan Co., Inc).

The Examiner respectfully disagrees. "Substantial" is a relative term intended to communicate equivalence to another value (i.e., "substantially equal" length or weight). In the vacuum of time, what is "substantially before"? Seconds? Minutes? Hours? Days? The Applicant's specification does not provide any guidance as to what "substantially before" means. "Substantially before" defines a farness (to a value), whereas "substantially equal" defines a closeness (to a value). The claim language conveys that the amount of time prior to automatically creating proposals is not as important, as long as the step of creating proposals is performed prior to the automatically scheduling and selecting steps, respectively. For purposes of an art rejection, the amount of time prior to selection has not been given weight, as long as the proposals are created prior to the scheduling and selecting steps.

Applicant has challenged to the 35 U.S.C. 112, second paragraph rejection of claims 1 and 12, where the Examiner has stated that the claimed invention does not positively recite the "enabled" steps.

As presented in the previous Office Action, claim language such as "enabled to" is indefinite, as "enabled" steps are not positively recited. "Enabled" merely conveys the "ability to" perform a step. For example, a climber is "enabled to" secure himself using a rope while scaling the side of a mountain. Without positively citing that the rope is used to secure the climber, the rope may be among the contents of the climber's backpack. In another example, a computer is "enabled to" perform a complex simulation, but until the computer is positively recited to perform a complex situation, the computer is merely **capable of** performing the calculation by virtue of having a processor. The Examiner maintains the rejection on the basis that "enabled to" language is indefinite without positive recitation of steps.

Applicant asserts that pre-calculating is a common programming technique known in the art of computer science.

The Examiner respectfully disagrees. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., pre-calculating) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from

the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claimed invention is not claimed as being embodied on a computer, computer-readable medium or a computer-executable program; thus, one of ordinary skill in the art would not interpret claim 11 as being a programming technique. Furthermore, the Examiner asserts that "pre-calculating" constitutes new matter, as it is not disclosed in the initial disclosure of the Applicant's invention.

Applicant argues that Wetzer does not teach or suggest creating a plurality of proposals at time substantially before a job is scheduled.

The Examiner respectfully disagrees. As explained above, weight has not been given to the "time substantially before" limitation. Wetzer determines the resource requirements and expected available resources, and develops a preliminary resource plan, before undergoing a reiterative optimization process (i.e., multiple plans are developed) to optimize said resource plan (at which point the job is scheduled) [Claim 1, Paragraphs 30-35].

In the previous Office Action mailed June 15, 2006, notice was taken by the Examiner that certain subject matter is old and well known in the art. Per MPEP 2144.03©, these statements are taken as admitted prior art because no traversal of this

statement was made in the subsequent response. Specifically, it has been taken as prior art that:

- It is old and well known in the art to associated appointments by customer
- It is old and well known in the art to associated blocks of time with the job scheduled to be performed during said block of time
- It is old and well known in the art to assign different priorities to resources
- It is old and well known in the art to conserve valuable and scarce resources by substituting less valuable and more plentiful resources

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the method as claimed is merely enabled to specify services and time dependencies of services and resources needed to perform a job; however the system does not actually positively recite these steps. Claim language such as "enabled to" is indefinite, as "enabled" steps are not positively recited. "Enabled" merely

conveys the "ability to" perform a step. For the purposes of examination, the examiner assumes the applicant will amend the claim to recite that the method actually specifies services and time dependencies of services and resources needed to perform a job.

Furthermore, in claim 1, newly added limitation (d) cites that a person specifies a desired time for starting a job. It is unclear whether the person in limitation (d) is the operator introduced in limitation (a). Clarification is required.

Claims 2-13 are dependent on claim 1; therefore those claims are also rejected under the same rationale.

Similarly, regarding claim 12, the method as claimed is merely enabled to schedule appointments for additional jobs; however the system does not actually positively recite these steps. For the purposes of examination, the examiner assumes the applicant will amend the claim to recite that the method actually schedules appointments for additional jobs.

The term "substantially" in claim 11 is a relative term that renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. "Substantial" is a relative term intended to communicate equivalence to another value (i.e.,

“substantially equal” length or weight). In the vacuum of time, what is “substantially before”? Seconds? Minutes? Hours? Days? The Applicant’s specification does not provide any guidance as to what “substantially before” means. “Substantially before” defines a farness (to a value), whereas “substantially equal” defines a closeness (to a value). The claim language conveys that the amount of time prior to automatically creating proposals is not as important, as long as the step of creating proposals is performed prior to the automatically scheduling and selecting steps, respectively.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 3, 5 and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Wetzer et al. (PGPub 2004/0162811).

As per claim 1, Wetzer et al. teaches a method for scheduling appointments to do a job, comprising the steps of:

(a) enabling an operator to specify each service and a time dependency of each service needed to perform the job **(establish a maintenance task database comprising a description of maintenance tasks to be performed within a specified time window for the end item based on the configuration; determining the resource requirements for each maintenance task in the maintenance task database. These resource requirements include at least one of labor, materials, tools, facilities, end item location, task precedence with respect to other tasks, and time span for the task)** [Paragraphs 21, 23];

(b) enabling an operator to specify a time availability of each resource that can be used to perform each service needed to perform the job **(determining the expected resources available 18 for the specified time window; determining the resource requirements for each maintenance task in the maintenance task database. These resource requirements include at least one of labor, materials, tools, facilities, end item location, task precedence with respect to other tasks, and time span for the task. These resource requirements may be defined by the component manufacturers or determined by past practice, or determined by other known means. The labor requirements include not only the hours of labor required but as well as the skill specialty required and any necessary certification of the technician required to perform the maintenance task)** [Paragraphs 16, 23];

(c) at a time substantially before the job is actually scheduled **{prior to the optimization of the development plan}**, automatically creating a plurality of proposals that specify when the job might be scheduled during a defined time period **(step 24**

includes developing a preliminary resource plan for the maintenance task to be performed within a specified time window; the steps of Developing Resource Plan 24 and Optimize Resource Plan 26 are performed prior to Creating Allocation Assignments 28 and Create work Orders 32), as a function of each service specified by an operator, and the time dependency of each service specified by an operator (the resource plan is based on the resource requirements, resource availability , maintenance execution status, and cost models), the plurality of proposals being created as a function of the time availability of each resource that can be used to perform each service needed to perform the job specified by an operator (the system can have a complete picture of all the resources required for those tasks, the resources that are available to perform those tasks, the cost for those tasks as well as all of the constraint and other rules imposed by the business organization and then develop a plan and optimize that plan dynamically and on a regular basis), each proposal indicating a time instance at which the job can be initiated during the defined time period (the system may then provide the user with the option to select which time window during which to perform the first task {suggesting that multiple acceptable time windows have been identified}) [Paragraphs 30-35, Figure 1];

(d) enabling person to specify a desired time for starting the job (optimizers will be customized for a specific company's preferences, and may allow human intervention to develop an optimized plan. For example, one such opportunity for selecting an option of between different plans may involve the task precedence

requirements. If a first task requires the completion of a second task before performing the first task, the system may identify several time windows within which the second task has already been planned. The system may then provide the user with the option to select which time window during which to perform the first task) [Paragraph 33];

(e) based upon the desired time for starting the job (the system may then provide the user with the option to select which time window during which to perform the first task), selecting one of the plurality of proposals that was created, to make an appointment for doing the job {allowing the user to select the time window during which to perform the first job in developing an optimized plan leads to the ultimate selection of the optimal plan} [Paragraph 33]; and

(f) automatically {software tools are used to perform the optimization; computer software “automatically” automates the optimization process} revising the plurality of proposals in response to said one of the plurality of proposals being selected, to accommodate changes in the time availability of resources that are required to perform said one of the plurality of proposals that was selected, in regard to proposals that have not yet been selected (After the preliminary resource plan is developed, the next step 26 is to optimize that resource plan. The optimization may come up with alternatives that require human intervention to select specific options that are desired, which will then cause the optimizer to reiterate back to the resource planning tools to re-execute the schedules) [Paragraphs 31-32].

As per claim 3, Wetzer et al. teaches the method of claim 1, wherein the step of automatically creating the plurality of proposals comprises the steps of automatically searching each of the services needed to perform the job to identify an availability of each block of time that is:

(a) sufficient in duration to perform the service **(the time span required for each maintenance task may relate to the task precedence with respect to other tasks and may relate to the sequence in which tasks are performed {i.e., is there enough time to perform each maintenance task in the time span})** [Paragraph 26]; and

(b) for which resources required to perform the service are available **(determine the resource available for a specified time window)** [Paragraph 27].

As per claim 5, Wetzer et al. teaches the method of claim 3, further comprising the step of splitting a block of time into pieces, to define a proposal having a split time interval in which the job can be performed **(Of a first task requires the completion of a second task before performing the first task, the system may identify several time windows within which the second task has already been planned)** [Paragraph 33].

As per claim 8, Wetzer et al. teaches the method of claim 1, wherein the step of selecting one of the plurality of proposals comprises the step of balancing usage of the resources that can be used to perform the services needed to perform the job **(the**

availability of the end item during a specific time window is a planning constraint that must be balanced between the operational demands the assets and the need for the maintenance activity) [Paragraph 27].

As per claim 9, Wetzer et al. teaches the method of claim 1, wherein the a plurality of the services needed to perform the job are carried out sequentially, with a first service being completed before a second service can be begun **(the time span required for each maintenance task will relate to the task precedence with respect to other tasks and this includes the relationship between waiting for the completion of one task before being able to start a second task) [Paragraph 26].**

As per claim 10, Wetzer et al. teaches the method of claim 1, wherein a plurality of the services needed to perform the job are carried out in parallel, with a first service being completed while a second service is also being done **(the time span required for each maintenance task will relate to the task precedence with respect to other tasks and this includes whether the tasks may be completed concurrently) [Paragraph 26].**

As per claim 11, Wetzer et al. teaches the method of claim 1, wherein the step of automatically creating the plurality of proposals is completed at a time substantially before the step of automatically selecting is carried out **{resource plans are developed (step 24) and optimized (step 26) prior to the creation of allocation assignments**

(step 30) and work orders (step 32). Until the optimized resource plan is developed, the reiterative optimization process yields a plurality of proposals. The optimization process then automatically selects the optimal proposal to schedule the job} [Figure 1, Paragraph 16].

As per claim 12, Wetzer et al. teaches the method of claim 1, further comprising the step of repeating steps (a) through (b) for each of a plurality of additional jobs, to enable scheduling of appointments to the additional jobs **(identifying newly discovered maintenance tasks required to be performed within the specified time window, updating the resource plan and creating additional allocation transactions; identifying newly discovered maintenance tasks required to be performed within the specified time window, determining the additional resources required for the newly discovered maintenance tasks, updating the optimization of the resource deployment incorporating the additional resources required, and creating additional allocation transactions)** [Claims 6, 13].

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wetzer et al.

As per claim 2, although Wetzer et al. does not explicitly teach the method of claim 1, further comprising the step of associating the proposal with a customer for whom the job is to be done.

However, it has been admitted as prior art, as a result of untimely and/or improperly challenged Official Notice, that it is old and well known in the art to associate appointments by customer. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Wetzer et al. to include the step of associating proposals with customers, because the resulting combination would enable the service provider to provide personalized service to the scheduled customer, rely upon previous historical experiences with said customer to become familiarized with required work during the scheduled appointment, and provide contact and billing information for services rendered to said customer.

As per claim 4, Wetzer et al. does not explicitly teach the method of claim 3, further comprising the step of associating a job identification with each block of time that is thus identified.

However, it has been admitted as prior art, as a result of untimely and/or improperly challenged Official Notice, that it is old and well known in the art to associate blocks of time with the job scheduled to be performed during said block of time. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Wetzer et al. to include the step of associating blocks of time with scheduled jobs, because the resulting combination enables service providers to account for scheduled work and avoid overbooking of resources (for example, assigning a machine to perform two jobs at once, or assigning an employee to service multiple widgets at the same time, or to schedule an employee while they are unavailable).

As per claim 6, Wetzer et al. does not explicitly teach the method of claim 1, further comprising the step of enabling an operator to assign different priorities to at least some of the resources, so that a resource assigned a lower priority is used prior to a resource assigned a higher priority, when selecting said one of the plurality of proposals to schedule the appointment.

However, it has been admitted as prior art, as a result of untimely and/or improperly challenged Official Notice, that it is old and well known in the art to assign different priorities to resources. It has also been admitted as prior art, as a result of untimely and/or improperly challenged Official Notice, that it is old and well known in the art to conserve valuable and scarce resources by substituting less valuable and more plentiful resources. It would have been obvious to one of ordinary skill in the art to

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modify the teachings of Wetzer et al. to include the step of assigning different priorities to resources, because the resulting combination would enable that said resources are managed effectively to meet the demands of different users with different priorities by avoiding monopolization of resources and resource starvation while conserving scarce and valuable/important resources (higher priority resources) by substituting less valuable and more plentiful resources (lower priority resources) for earlier consumption.

12. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wetzer et al. as applied to claim 1 above, and further in view of Crici et al. (PGPub 2005/0027580).

As per claim 7, although not explicitly taught by Wetzer et al., Crici et al. teaches the method of claim 1, wherein the step of specifying the time availability of each resource includes the step specifying any block of time in which a resource is unavailable to perform a service during the defined time period **(The physician can block out periods of time for which no appointments can be scheduled; The system provides the service provider with the ability to continually modify the appointment schedule in order to block out additional slots of time or to make time slots available; The service providers can change the appointment schedules in any way desired, for example, to block out days or sections of time when they are not available)** [Paragraphs 7, 16].

Both Wetzer et al. and Crici et al. are directed towards scheduling services; therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Wetzer et al. to include the step of specifying blocks of time in which resources are unavailable because the resulting combination would enable users to assess the best time to be serviced by identifying time blocks in which resources are available, further enabling Wetzer et al. to determine the expected resources available for a specified time window as part of the process of scheduling tasks [Paragraph 16].

As per claim 13, although not explicitly taught by Wetzer et al., Crici et al. teaches the method of claim 1, further comprising the step of enabling an appointment to be canceled, and in response thereto, automatically revising the plurality of proposals, to accommodate changes in the time availability of resources that were previously required to perform said one of the plurality of proposals corresponding to the appointment that was canceled, making the resources available for other appointments **(allow a potential service receiver to indicate a preference for a time slot which is already reserved and, if that time slot subsequently becomes available prior to the appointment, for example, due to a cancellation, the second service receiver is notified)** [Paragraph 12].

Both Wetzer et al. and Crici et al. are directed towards scheduling services; therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to

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modify the teachings of Wetzer et al. to include the step of enabling appointment cancellation because the resulting combination would make the corresponding time blocks available for scheduled service by prospective customers, further enabling Wetzer et al. to establish the maintenance task database of tasks to be performed within a specified time window, and determine the expected resources available for a specified time window as part of the process of scheduling tasks [Paragraph 16].

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Choi whose telephone number is (571) 272 6971. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PC

November 24, 2006



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